Applicant: Swan, et al Serial No.: 10/723,505

Filed: November 26, 2003

Title: BIOCOMPATIBLE POLYMERIZATION ACCELERATORS

Examiner: Naff, David M.
Group Art Unit: 1657
Docket No.: SRM0006/US

<u>REMARKS</u>

This communication is responsive to the final Office action mailed November 21, 2007. The current response to the final Office action includes an amendment to the claims. It is respectfully submitted that the claims in their amended form place the application in condition for allowance.

Interview

The Examiner is thanked for courtesies extended in granting an in-person interview in the above captioned application to Paul L. Weaver, Applicants' representative, on January 30, 2008. During this interview, the advantages of the invention were discussed, as well as the possible addition of feature of a carbonyl group to the polymerization accelerator in the claims. Distinctions between the Applicants' invention and the cited art were discussed. The Examiner provided an Interview Summary to the Applicants' representative at the end of the interview.

Status of claims

Previously, claims 1-11, 13-21 and 28-32 were pending, with claim being 32 allowed, claims 1-10, 13-21 and 28-31 rejected, and claim 11 as allowable but objected to as being dependent on a rejected base claim.

In the present response, independent claims 1 and 21 are amended, and new claim 33 is added. Applicants address the rejections set forth in the final Office action. According to the following remarks, Applicants respectfully submit that the pending claims are distinguished over the prior art, and are in condition for allowance.

Amended claims 1 and 21

Claims 1 and 21 has been amended to include the feature of a "carbonyl group." Claim 13, which recited:

The composition of claim 12 wherein the polymerization accelerator comprises a carbonyl carbon.

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has been cancelled.

As such, the scope of amended claims 1 and 21 would include accelerators comprising (i) a biocompatible functional group, (ii) an N-vinyl group and, (iii) a carbonyl group. The claim encompasses accelerators comprising a cyclic structure, as well as those that are non-cyclic. Accelerators having a carbonyl group having a cyclic structure, and those that are non-cyclic are supported in the specification and the claims as originally filed. The amendment to claims 1 and 21 does not introduce new matter.

The support for the addition of this subject matter can be found throughout the specification, for example, at page 4, lines 18-19:

One group of polymerization accelerators described herein has an N-vinyl group and a carbonyl carbon.

at page 12, lines 4-6:

In some embodiments, the invention provides (a) a polymerization accelerator having (i) a biocompatible functional group, (ii) an N-vinyl group and, (iii) a carbonyl carbon.

and in claim 13 as originally filed:

The composition of claim 12 wherein the polymerization accelerator comprises a carbonyl carbon.

An example of an accelerator having a basic structure with carbonyl and n-vinyl groups that is non-cyclic is shown in Formula IV on page 12:

$$R_3$$
 C
 N
 R_2

An example of an accelerator having a basic structure with carbonyl and n-vinyl groups that is cyclic is shown in Formula V on page 12:

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$$Z$$
 R_3
 R_2
 R_1

Entry of the amendment to claims 1 and 21 is respectfully requested.

Claim 21 has also been amended to provide the term "biocompatible <u>functional</u> group," solely to be consistent with its use in pending independent claims 1, 32, and 33, and dependent claims 10 and 11. This amendment is supported in the specification and claims as originally filed.

As noted on page 5, lines 2-4, of the specification, the biocompatible functional group provided by the polymerization accelerator can improve the biocompatibility of the surface having the formed polymeric matrix. The biocompatible functional group is also clearly discussed on page 8, line 23, to page 9, line 2, of the specification. As such, the claim terminology meets the guidelines set forth in MPEP 2173.01 and 2111.01.

New claim 33

New claim 33 has been added which is directed to a composition comprising a polymerization accelerator having a cyclic structure and at least all of the features recited in independent claim 1.

The amendment introducing claim 33 does not introduce new matter.

The support for the subject matter of new claim 33 can be found throughout the specification, for example, at page 12, line 17, to page 13, line 6.

Entry of the amendment introducing new claim 33 is respectfully requested.

35 USC §102

The Office action has maintained the rejection of claims 1-10, 13-21 and 28-31 under 35 U.S.C. §102, as being anticipated by Chudzik *et al.* (7,094,418 B2; herein "Chudzik").

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Chudzik does not anticipate the claims as currently amended

Applicants have amended claims, and it is submitted that the amended claims are not anticipated by the cited art, including Chudzik. Reconsideration of the amended claims is respectfully requested.

The polymerization accelerators (which are present in a polymerizable composition) having the features as recited in independent claims 1, 21, 32, and 33, are not taught by Chudzik.

In particular, for amended claims 1 and 21, and new claim 33, Chudzik does not teach a polymerization accelerator comprising:

- i) a biocompatible group
- ii) an N-vinyl group, and
- iii) a carbonyl group.

In view of the above, the rejection as being anticipated by Chudzik is respectfully requested to be withdrawn.

The amended claims would not have been obvious over Chudzik at the time of the invention

Applicants assert that Chudzik does not suggest modifying a polymerization accelerator in such a way that would lead to the invention as currently claimed. The Office action has pointed to the teaching of N-vinyl caprolactam at column 11, line 14, in Chudzik. However, there is no teaching in Chudzik of modifying N-vinyl caprolactam to provide a polymerization accelerator with a biocompatible functional group in the polymerizable composition as currently claimed.

35 USC §103

The Office action also rejected claims 1-10, 13-21 and 28-31 under 35 U.S.C. §103(a) as being unpatentable over Hubbell *et al.* (U.S. Pat. No. 5,529,914; herein "Hubbell '914") or Hubbell *et al.* (U.S. Pat. No. 6,258,870 B1; herein "Hubbell '870"). Applicants respectfully traverse the rejection. Hubbell '914 or Hubbell '870 does not either teach or suggest all the features recited in the present claims.

As noted above, the claims have been amended.

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As noted in the Applicants' previous response of August 21, 2007, neither Hubbell '914 nor Hubbell '870 teach a polymerization accelerator comprising a biocompatible functional group and an N-vinyl group. Furthermore, neither Hubbell '914 nor Hubbell '870 teach a polymerization accelerator comprising a biocompatible functional group, an N-vinyl group, and a carbonyl group, an as recited in amended claims 1 or 21.

Further, Hubbell does not suggest the modification of an accelerator, such as to provide a biocompatible functional group. There is nothing in either of the claims of the Hubbell '914 or '870 documents, or the overall teaching of the Hubbell documents that teaches or suggests that biocompatibility is provided by a biocompatible group on the polymerization accelerator.

Because Hubbell does not teach or suggest all of the limitations as recited in the pending claims, a rejection based on an asserted prima facie cased of obviousness is not supported. Withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is respectfully submitted that all of the claims and the present application are in condition for allowance, which is earnestly solicited. In the event that a phone call would help resolve any remaining issues in the application, the Examiner is invited to contact the undersigned at (651) 275-9835.

Respectfully Submitted,

Dated: 20 Feb 08

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PLW/jj/41967